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SUPPLEMENT No. 1.

Working Class Budgets and the Cost of Living Index

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EDITORIAL NOTE

Subscriptions to the BULLETIN should be sent to Basil Blackwell, 49 Broad Street, Oxford ; the cost of each issue is 1s., and of a yearly subscription (three-weekly issues) 15s.

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THE PROTEIN SITUATION

Protein is needed by the body for maintenance, repair and growth. The proteins from animal sources—meat, milk, cheese, eggs, fish and poultry—are of more use to us than those derived from certain vegetable sources—cereals, pulses and nuts. It is generally agreed that the body¹ needs at least 490 grammes (i.e. 17.2 oz.) of protein each week while some authorities put the figure at 700 grammes (or 24.6 oz.). Of this at least 40 per cent and probably 50 per cent should be from animal sources.

¹ For a man of average weight. A woman needs somewhat less—about 420 grammes; the child of six about 350 grammes, but the child 12—15 much more—at least 700. The typical family will therefore need 1360 grammes per week or 490 per head, and little error will be introduced by using this figure throughout.

By far the most alarming aspect of the present food situation is the shortage of protein in the diet. In the early winter of 1940 the meat ration was 2s. 2d. which may be equated to $32\frac{1}{2}$ oz.,¹ the bacon ration 4 oz. Other sources of animal protein were not yet rationed though milk and eggs were in short supply. A not over generous estimate of average weekly consumptions per head would provide 2 oz. cheese, 5 pints of milk and 2 eggs. This, together with the meat and bacon ration would give a weekly intake of about 295 grammes (10.4 oz.) of animal protein ;² probably the consumption of fish and poultry would increase this in certain cases, but on the other hand it is doubtful whether the full meat ration was consumed by everybody.³ There was certainly no shortage of animal protein.

Vegetable protein was supplied by bread, flour, oatmeal and the pulses. The peace-time consumption of wheat flour has been estimated at 65 oz., per head per week ; if we assume this unchanged a further 7.05 grammes of vegetable protein were so consumed ; to this we may add 15 grammes (0.5 oz.) from oatmeal and 15 grammes (0.5 oz.), from the pulses, giving 230 (8 oz.) grammes of vegetable protein per head per week.

Total protein consumption, even excluding fish and poultry, etc. as late as early December of last year was thus adequate at 525 grammes (18.4 oz.) per week, and the correct balance between animal and vegetable protein was being maintained.

But during the current year, meat rations though nominally 1s. to 1s. 2d. per head in practice rarely reached this amount and an average of 15 ounces is a high estimate. Bacon remained at 4 oz., cheese has averaged 2 oz., milk at 4 pints, and eggs at 1 per week are now fair estimates of consumption levels. This provides approximately 175 grammes (6.15 oz.) of animal protein. In the June survey of consumption in Oxford unrationed sources were providing some 30 grammes (1.05 oz.). The total animal protein intake may then be estimated at 205 grms. or 7.20 oz. That the intake of vegetable protein should have been increased is a not unexpected result. We are told that flour consumption has risen by 20 per cent i.e., to 78 oz. per head per week. This yields 235 grammes (8.25 oz.) : a further 45 grammes (1.6 oz.) from oatmeal and the pulses i.e., allowing a 50 per cent net increase, will yield a total vegetable protein weekly intake of some 280 grammes (9.85 oz.). On the basis of these figures it is clear that the excess of current protein consumption over the necessary minimum has now become very small, unless there is more canteen and communal feeding than

¹ On the basis of $1\frac{1}{4}$ ounces = 1d.

² All calculations are based on McCance and Widdowson: 'Chemical Composition of Foodstuffs,' Medical Research Council, Special Report No. 25.

³ See Supplement to this BULLETIN 'Working Class Budgets, June, 1941,' by T. Schulz, and 'The Consumption and Rationing of Meat and Cheese,' by R. S. G. and M. E. E. Rutherford, Oxford Economic Papers, No. 5, June 1941.

these figures indicate. No protein deficiency may yet be noticeable but any further reduction in consumption will definitely produce it.

PROTEIN INTAKES									
Minimum Required									
Highest* Lowest†									
Estimates Estimates Estimated from Diets									
October 1940 June 1941									
	gms.	ounces	gms.	ounces	gms.	ounces	gms.	ounces	
Animal sources	... 350	12·3	196	6·9	295†	10·4‡	205§	7·4§	
Vegetable sources	... 350	12·3	294	10·3	230	8·0	280	9·8	
Total	... 700	24·6	490	17·2	525†	18·4	485§	17·2	

* Assuming total 700 grammes, animal 50 per cent.

† Assuming total 490 grammes, animal 40 per cent.

‡ Excluding sources such as fish and poultry not rationed in June 1941.

§ Including such sources.

Further increases in the consumption of the cereal sources in order to make up the gap will probably not take place since the bulkiness of the diet has greatly increased and is probably approaching the maximum with which the stomach can efficiently deal. A deficiency in proteins will retard the growth of children, and though its effects may not be immediately apparent in the adult population it will progressively lower resistance to disease and make recovery from illnesses more difficult. With a war-time winter ahead, this is not a prospect to be faced lightly.

But this is by no means all the picture. To make possible the increase in flour consumption, more wheat has to be imported; the lower animal protein supplies of course provide a relief to shipping on the other hand. It now becomes necessary to examine the substitution in the light of the shipping situation. Two qualifying points must always be borne in mind.

To import wheat is to import animal feeding stuffs as well as flour. Wheat offals feed cattle and produce meat or milk. Assuming an extraction rate of 75 per cent¹ then we may use as a rough guide: 100 lb. of wheat = 75 lb. of flour + 25 lb. wheat offals which if used as a *production* ration will give 2½ lb. beef or 6 gallons of milk. These figures are rough and assume that *maintenance* rations are already available.

Secondly, to import meat a very special class of shipping has been built up and it is doubtful whether there are many alternative uses for these ships. To import meat therefore demands only a place in a convoy; not to import meat may mean idle shipping. To import wheat demands shipping tonnage that might be used for other requirements, over and above the demand for convoy space.

¹ If the extraction rate is greatly increased a point may be reached where the shortage of wheat offals so diminishes the meat supplies as to increase the substitution demand for flour to such a point, that even with the higher rate of extraction, more wheat is required. There is some evidence to suggest that a 75 per cent rate of extraction is currently this critical point.

Considerations of registered tonnage or bulkiness are not therefore, I suggest, of great relevance, but the shortage of information on this question makes judgment difficult.

The home production of wheat in the three years before the war averaged about 1,400,000 tons; imports excluding war stocks in the last year were about 5,500,000 tons giving a total supply of 6,900,000 tons. Allowing 5 per cent of this total for animal feeding and distilling, and the peace time extraction rate of 72 per cent, flour supplies averaged 4,700,000 tons. The current wheat demands, assuming a 20 per cent increase in consumption, and a 75 per cent rate of extraction, are of the order of 8,000,000 tons. Current home production is a more difficult matter to assess; the newly ploughed pastures may not have been very fertile, though land put down to grass during the 'thirties when milk was relatively more remunerative may have retained most of its fertility. A home production of 2,000,000 tons seems a high estimate. About 5,900,000 tons must then be imported, of this total $1\frac{1}{4}$ million tons may be attributed to the increased demand for flour due to lower animal protein rations.¹

FLOW OF DEMAND FOR WHEAT EXPRESSED IN TERMS OF TONS PER YEAR

					1938	Winter 1940 000,000 tons	Summer 1941
Wheat:	Home grown	...	...	...	1.40	2.00	2.00
	Imported	...	...	...	5.50	4.65	5.90
	Total	...	...	...	6.90	6.65	7.90
Wheat:	Milled	...	...	...	6.50	6.25	7.50
	Extraction rate	...	...	...	72%	75%	75%
	Flour produced	...	...	...	4.70	4.70	5.65
Wheat used for other purposes					0.40	0.40	0.40

The peace-time annual imports of meat, poultry, fish, cheese and eggs were slightly over 2 million tons. The weight of the extra wheat imports since the beginning of the war is probably therefore of the same order of magnitude as the weight of the meat etc., that they have replaced. What the effect in terms of registered tonnage has been it is difficult to say but certainly no spectacular saving of shipping tonnage has been secured, and probably any further increase of wheat imports will make net extra demands on shipping space.

It must therefore be concluded that further increases in cereal imports will be undesirable both from considerations of shipping space and digestibility; while at the same time the protein deficiency of the diet remains.

¹ Had there been no increase in consumption, and a 75 per cent rate of extraction the total requirements of wheat would have been $6\frac{2}{3}$ million tons, and the import requirements $4\frac{2}{3}$ million tons.

This is not a happy conclusion to reach. Two problems cry out for solution ; shipping requirements should if possible be reduced, and the protein content of the diet must be increased.

To reduce the demand on shipping, the use of home-grown cereals, particularly oats, rather than wheat might be tried. The oat grain is richer in protein, fats, minerals and vitamins, than the wheat grain. If the oats are home-grown, to increase the human consumption would necessitate its removal from animal consumption. Direct human consumption would extract nearly 10 times as much protein from the oats than would result from its use as a production ration for a bullock. But the difficulty is again that the human digestion (at least the English one) cannot adequately deal with very large quantities of oatmeal. Oats have a place, and an important place, in the diet of the nation; but there remain large culinary fields where it cannot be substituted for wheat without grave digestive difficulties. And politically it may be difficult, even in war-time, to make the farmer release the oats; the bulk (80 per cent) of home grown oats has always remained on the farm and though the acreage under oats has probably shown the greatest increase under the ploughing campaign, farmers short of imported feeding stuffs, are generally feeding their stock on this oats.

With barley, the position is fundamentally the same. Barley is not very digestible for direct consumption, and is to the farmer a valuable feeding stuff; while the further reduction of brewing is probably politically unwise.¹

Dilution of wheat flour with potato flour is only a solution on the surface; carbohydrates are provided certainly, and with them calories, but the peeled potato has no protein content whatever.

Any attempt to reduce the shipping demand by keeping meat consumption down, and relieving the strain of wheat by substituting home grown cereals or potatoes, will not touch the dietetic problem of a protein deficiency, while by increasing the bulk of the diet will encourage digestive troubles. An immediately more practical policy would be to substitute imported animal protein supplies. I would suggest as a wise import policy, the reduction of wheat imports to $4\frac{3}{4}$ million tons; together with the 2 million tons home produced this would be sufficient to maintain flour supplies at the peace-time level. This would effect a saving of $1\frac{1}{4}$ million tons of wheat imports; it would mean a loss of wheat offals sufficient to produce 32,000 tons of beef or 75,000 gallons of milk. The loss of protein to the country would be 100,000 million grammes (or 100

¹ The controversy on this point has been largely misdirected. It is almost axiomatic that first hand human consumption is better than second-hand consumption via an animal; and if the calories provided by alcohol are genuinely assimilated by the human body then beer in moderation is a more useful way of using barley than as pigmeal. The controversy should focus on the biological point of assimilation, and *not* on the temperance issue.

tons) from the flour and 5,000 million grammes (5 tons) from the wheat offals.¹ But 700,000 tons of meat or 430,000 tons of cheese would produce the same quantity of protein! Thus it is clearly possible, even with the present deficient diet, to save shipping space by importing animal protein sources. And, even more so, it is possible to improve the diet radically by using all the wheat convoy space saved, for ships carrying meat and cheese. Thus if $1\frac{1}{4}$ million tons of meat were imported in place of the extra wheat the *net protein gain* would be 80,000 million grams (or 80 tons) annually or 35 gms. per head per week (1.22 oz.); or if in the form of cheese, nearly 60 grammes per head per week (or 2.11 oz.).² Certainly a programme of substituting mainly cheese for wheat could provide most of the protein required and in the animal form. And that with little if any increase in shipping space! By this means alone an adequate diet, without further strain on shipping, could be assured.

At the same time the home production policy needs radical change; the shortage of animal protein necessitates the most efficient use of all feeding stuffs available, i.e., the feeding of them to those animals that can most efficiently convert them into a form that we can use. The cardinal fact in all war-time agricultural policy must be that the food which, fed as a production ration to a bullock, will produce 1 lb. of beef will, if fed to a dairy cow, produce $2\frac{3}{4}$ gallons of milk. In terms of proteins content the milk is quite six times more valuable. The abolition of all home grown beef—except that derived from bull calves (and ‘poor doers’ in the dairy herd)—and the rapid extension of the dairy herd is perhaps the most immediate need of the whole war situation. That we should need to ration milk because the voice of the live stock farmer carries most authority in the councils of the Ministry of Agriculture, and because the working man is believed to be unwilling to surrender his already shrinking joint of prime English beef, is a most grave reflection on the conduct of the war on the food front. Technical difficulties there certainly are in the switch-over—but no more than those already overcome in the industrial field.

In conclusion it cannot be too strongly urged that any further reduction in animal protein sources would be extremely undesirable and that to endeavour in part to substitute cereal sources of vegetable protein places a heavy burden on the available shipping and is likely to lead to digestive troubles. A far better policy would be to use whatever shipping is available for the import of meat and cheese, and at the same time progressively to direct home production from meat to milk, cheese and even eggs.

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¹ There is, of course, also a loss of carbohydrates as well.

² Assuming a population of 44 millions.

TOWARDS COMPREHENSIVE RATIONING

1. After a short period of optimism which followed the new Budget the problem of inflation has come now before the public with increased urgency. The view expressed in this BULLETIN that the new Budget is not likely to prevent inflation¹ has, unfortunately, been proved true by the hard fact of everyday experience. The recent White Paper on Wage and Price Policy also warns against the danger of inflation and recommends wage stabilization as a remedy. It has been argued many times in this BULLETIN that the only radical, fair and efficient way of preventing inflation is some type of comprehensive rationing.² In particular in the last BULLETIN the argument in favour of it as opposed to the remedy of wage stabilization has been put very convincingly by Mr. Burchardt. I do not propose, therefore, to return here to this problem but only to examine what in the present circumstances is the simplest way of achieving fairly comprehensive rationing of consumption goods.

The plan of rationing of expenditure in shops which I presented in this BULLETIN in its final version at the beginning of this year has been superseded to a certain extent by a substantial expansion of specific rationing which has taken place in the meantime. To superimpose rationing of expenditure on the now existing specific rationing of food and clothing would create a system of great complexity, since for a wide range of goods two types of coupons would have to be surrendered. I propose now, therefore, that rationing of expenditure should be used for closing the loopholes in the existing rationing system. The most important of these loopholes is unrationed food—which still represents about two-thirds of the total food consumption—and drink and tobacco. I thus suggest as a minimum programme the rationing of joint retail expenditure on these items; in addition the cloth rationing scheme should be appended and stringent rationing of coal, gas and electricity started immediately. This would still leave many non-food commodities outside the rationing system, and its further extension may have to be considered in the future, but for the present the above seem to be the most urgent demands for rendering it fairly comprehensive. We are now going to consider the above points in some detail.

2. The limitation of the total expenditure on food at present unrationed, drink and tobacco has two important advantages over a further extension of specific rationing in this field: (i) further additions to the list of rationed foodstuffs would render the rationing system very complicated and cumbrous; (ii) more important still is that while the commodities so far rationed are universally consumed this is not the case for many commodities unrationed at present. The striking examples are drink and tobacco, but in the case of many

¹ Vol. 3, No. 6.

² Cf. my articles in Vol. 3, Nos. 1, 4, 6, 8.

foodstuffs also, consumption depends much on individual tastes and habits. It is therefore important to secure freedom of choice in consumption of the goods in question.

The control of rationing by value is in general more difficult than that by weight or points, because of the difference between wholesale and retail prices. However, in the case of food, drink and tobacco this difficulty may be easily overcome.

Indeed most retail prices of food, drink and tobacco have now a definite level all over the country. It is therefore possible to enforce the following rule: when the shopkeeper buys these goods from the wholesaler or manufacturer he must surrender coupons for the amount representing their *retail* value. In this way rationing by value operates much like rationing by points, and may be organized by the Ministry of Food and the Board of Trade on the same lines as the rationing schemes now in existence.

The value of the 'expenditure ration' on food not rationed specifically, drink and tobacco must be fixed at such a level that: (i) running down of stocks should stop; (ii) prices should cease to rise in general and should fall in the case of such commodities where the price advance up till now was very sharp; (iii) acute shortages, queues, etc., should become uncommon. Since statistics of food imports and production are at present not available I shall not attempt here to make even a rough estimate of the 'expenditure ration' in question. But it may be difficult to estimate it even with full knowledge of the situation and thus it may be necessary to determine it by trial and error.

The fall of prices of certain commodities as a result of the proposed rationing scheme may render their production unprofitable. If its continuation is found desirable it will be necessary to grant subsidies to the producers. There will also be among the trade stocks certain luxury foods which will become unsaleable under the operation of our scheme. Such goods should be bought off by the Government at cost price and distributed to hospitals etc.

Restaurant customers are so far not affected by rationing. It has been argued that their inclusion into rationing schemes would raise the average rations only slightly, since the food consumed in restaurants is only a small percentage of the total food consumption. Now, however, when it is commonly recognized that the heavy workers must have higher rations, it is pretty clear that 'mobilizing' restaurant food for this purpose would be very useful. It is possible to elaborate rules as to how many coupons of various categories must be surrendered for various types of meals and this must be indicated in the menus. The general principle is that the total coupon value of a meal must be equal to the retail value of the ingredients and thus lower than the price of the meal by the cost of services involved. In this way restaurant customers will be treated equally with the rest of the population.

Heavy workers must be allowed higher rations both of foods now rationed and also higher 'expenditure rations' which we propose for other food, drink and tobacco.

3. The main drawback of the point rationing of clothing and footwear now in operation is that it puts no limit to the *value* of goods purchased. This tends to induce richer people to buy cloth of very high quality and thus leads to waste of labour for manufacturing such goods (and also of foreign exchange in cases when it requires more expensive raw materials). The simplest way of dealing with this problem is to prohibit the manufacture (or import) of clothing (or dress materials) over a certain price limit. This will release labour for manufacturing goods of more durable qualities which as a result of point rationing are in greater demand and whose supply may thus become inadequate.

Another important rationing problem arises in connection with the coal shortage. Here the best method of meeting the difficulties is to introduce stringent combined point rationing of gas, coal and electricity. This must be made at once before people with sufficient means and storage space have accumulated large stocks for the winter. On the other hand if coupons are issued for, say, half yearly periods people will not be prevented from purchasing coal now for the winter, but only get correspondingly less later on. If, however, rationing, by assuring future supplies, would unduly reduce the present purchases—which would lead to congestion of railways in the winter—it is possible to enforce in the next months purchases and storage by Local Authorities and merchants.

4. In the operation of every rationing system there arises the problem of low incomes being unable to purchase the full ration. This causes rationing not to be equitable, and the more so that the poor, being unable to spend some of their coupons, are likely to use them for the benefit of the rich against reward. This difficulty may be remedied in the following way.¹ The Government declares that it is prepared to buy unused coupons of every description at the values to which they relate (in the case of point coupons for clothes and footwear their 'average' value would be paid). As a result anyone unable to use a certain part of his coupons because his income is too small would be able to sell *half* of the unused coupons to the Government and so obtain the means for using the other half.² In this way both allowances are granted automatically to the lower groups and the transfer of their coupons to richer people against reward is prevented.

This scheme implies, it is true, a certain increase in Government expenditure, but every coupon bought by the Government makes sure that the consumption of rationed goods will be by so much

¹ Cf. BULLETIN, Vol. 3, No. 5.

² He may of course also sell more than a half and increase his expenditure on unrationed goods and services.

lower as compared with the level corresponding to full use of coupons issued.

5. The measures outlined above will create, I think, a fairly comprehensive and equitable system of distribution of goods in short supply. After the most urgent demands have been satisfied it will probably be necessary to include in the rationing system some additional categories of non-food goods and services.

M. KALECKI.

THE PRODUCTION EXECUTIVE'S REGIONAL BOARDS

1. THE PRIORITY SYSTEM

The recent reorganization of the Area Boards offers an opportunity to discuss the question of regional organization, as far as it is concerned with war production; the problem can, however, be considered only on the basis of a broad outline of the existing priority system.

The two chief aims of this system¹ are, first, to secure a balanced output, which implies that no particular part of production should be held up because other parts are behind schedule; and second, to secure that the available factors of production should be used for the most urgent purposes.

In contrast to the priority system in the last war, which worked with a grading according to products, the existing system is primarily one of rationing and allocating scarce raw materials. Its first task is to allocate the available industrial capacity, raw material, labour, and means of transport to the various supply departments. The need for an impartial authority to carry out this allocation and to eliminate competition between departments has led the priority organization through several stages, which are marked by the Ministerial Priority Committee (early stage of the war), the Production Council (from May 1940), and the Production Executive (from January 1941). What was originally a body co-ordinating the various Departments' priority organizations has retained many of its original characteristics; its authority in deciding between the claims of various departments was, however, apparently, not strong enough, for in May 1941 a new Minister of State was appointed as 'referee' in questions of priorities. This appointment has since been cancelled; according to a statement by the Prime Minister (July 16th) the Chairman of the Production Executive is now responsible for the settling of conflicting priorities and claims of the different departments.

Each department, having received its share of industrial capacity and material, distributes it by means of its own priority organization between various uses. The individual manufacturer has his capacity allocated to one or several departments, and his activities are

¹ See Select Committee on National Expenditure 1940 10th Report.

directed by a system of rationing and licensing materials. Much more important than this, however, are the progressing organizations¹ of the departments, which are able to speed up, control, or shift production directly. They are the strongest instrument for overcoming bottlenecks.

Apart from the system of allocation there is a general priority direction issued by the Ministry of Supply, giving priority to certain specified classes of armaments.

2. THE MOTIVES FOR DECENTRALIZATION

The demand for a certain degree of decentralization of the control of war industry arose directly from the requirements of the priority system itself. (1) The working of this system requires a knowledge of the available resources, especially of industrial capacity and the survey of these resources must be kept up to date in view of changing circumstances (e.g., destruction by enemy action). It is clear that this current survey can only be carried out by people on the spot who are acquainted with local conditions. Thus the necessity of finding out the capacity of a multitude of smaller firms was the first reason for setting up the Area Boards. (2) The progressing organization, which is a most important part of the whole system,² also needs people on the spot who can ascertain at rather short intervals the shortcomings or difficulties experienced in carrying out the production programme, and who must be familiar with the particular plants in which they do progressing. (3) The same arguments which apply to progressing also apply to cost control; if it is to be achieved without delay it can only be carried out on the spot. (4) If production is held up on account of lack of raw materials the necessary speed in taking remedial action can be achieved only by a local organization which can quickly ascertain the facts, and possibly reallocate materials in the region. (5) If it becomes clear at any moment that one firm cannot carry out some orders with its own equipment whereas other firms, not far away, have equipment and labour available, the contracts should be redistributed;³ it is claimed that this re-distribution of contracts which must be based on intimate knowledge of the productive equipment, efficiency, labour available, etc., can be effected with the necessary speed only if there is no need to refer back to a central authority.

3. DEVELOPMENT OF THE AREA ORGANIZATION

The actual development of regional organization has passed through three stages since the beginning of the war. In the first

¹ The duties of the progress officers are to ascertain at short intervals (say fortnightly) the state of fulfilment of the production programme, to report on it, to find out where production has to be speeded up and what reasons there are for any delay in a particular line.

² Compare Reports of the Select Committee 1940 X page 14.

³ 'War Economy—the third stage,' *Banker* September 1940.

stage, Area Boards consisting only of departmental officials were set up in each of the Defence Regions. Their functions were not clearly defined and their staff was obviously inadequate for the achievement of any serious purpose.¹ In the summer of 1940 the Area Boards were reconstituted so as to include three representatives of the employers and three representatives of the trade unions in the Region, the representatives of the three supply Ministries, of the Board of Trade and the Ministry of Labour, and a liaison officer between the Area Board and the Industrial Capacity Committees. The Area Boards in their corporate capacity, were responsible to the Industrial Capacity Committee of the Production Council (now Production Executive). The official members of the Board, however, were responsible to their respective departments. The progressing organization remained outside the Area Boards; the production branches posted progress officers in the areas who reported directly to their departments but were supposed to be in close touch with the Area officers.² The functions of the reconstituted Area Boards remained undefined.

An idea of the practical working of the reconstituted Area Boards is given in an article by the Chairman of the London and South-Eastern Board.³ This Board had instituted 9 capacity clearing centres (based on Ministry of Labour divisions) to keep the survey of capacity up to date and to effect the interchange of machine tool capacity between firms. At that time (last autumn) the Board was still mainly concerned only with big firms of the engineering industry, and many employers and workpeople were 'as yet imperfectly aware of the existence of the Board.'⁴

The main achievement of the reconstituted Area Boards was the survey of machine tool capacity which became available after about one year of war. They do not seem, however, to have overcome the difficulties which beset the working of the priority system 'at the factory level' (see the 12th Report of the Select Committee, 1941, p. 3, referring to evidence received in March of this year). There are still the old complaints about idle capacity, work held up on account of delays in the allocation of raw material, delays in transport and conflicting instructions.⁵

The third stage in the development of decentralization was reached in June 1941 when the Area Boards (in their corporate capacity) were made directly responsible to the Production Executive; they were re-named 'Regional Boards of the Production Executive.' At the same time a Central Joint Advisory Committee, con-

¹ Select Committee 1940, 6th Report. See also Hansard August 7th, 1940.

² According to Select Committee 11th Report 1940, page 22, there were 44 Progress officers, 20 Movement officers, and 7 Machine Control Progress Officers.

³ *Board of Trade Journal*, November 21st, 1940.

⁴ *Ibid.*, page 315.

⁵ See the article 'Handcuffs for Industry,' *Times*, May 21st, 1941.

sisting of 12 employers and 12 trade unionists was set up to advise the Production Executive on all matters concerning the Regional Boards. The Boards include, as before, three representatives of employers and workers respectively, representatives of the three supply departments, of the Board of Trade and of the Minister of Labour; in addition there is now a representative of the Ministry of Works and Buildings (Emergency Repair Organization), and one of the Raw-material Department of the Ministry of Supply as well as the Regional Transport Commissioner, and the Chairman of the Machine Tool Area Committee. The functions of the Boards have now been defined, but it appears from their enumeration as well as from an explicit statement in the House that they are merely advisory. They do not include progressing, so that the separate progressing organizations are maintained as before. Apparently the official members of the Board continue to be individually responsible to their own departments.

Among the functions assigned to the Regional Boards, there is the maintenance of the register of capacity, the interchange of machine tool capacity, and advising on action to be taken to adapt the distribution of orders to the capacity of firms. Almost all of the remaining duties are to be undertaken in co-operation with other regional organizations which have not been embodied into the Regional Boards and lead a separate existence.¹ It thus appears that there is only a very small number of questions which the Regional Boards will be able to deal with by themselves, the majority of the questions being dealt with in collaboration with other bodies. This and the fact that all its functions are only advisory will certainly mean that the Regional Boards will fail to gain a predominant place as compared with the various other regional organizations.

While executive functions are at present withheld from the Boards they may be allocated to them in case of an emergency: the Boards are directed to establish contact with the Regional Commissioners in order to draw up plans to meet an emergency.

In order to see the recent changes in Area Organization in their proper perspective it may be useful to compare the present state with the recommendation put forward a year ago by the Select Committee:² 'That the whole Area Organization should be expanded and *unified* on an inter-departmental basis; that it should be fully responsible for all area work concerned with production, capacity, labour and transport, and should co-ordinate and *translate into action* the decisions of the 'Government Priority Committees.'

¹ The Emergency Service Organization of the Ministry of Aircraft Production, the emergency repairs department of the Ministry of Works and Buildings, the Regional Controller of factory and storage, the Railway officer, the Regional Transport Commissioner, the Control Organizations of the Ministry of Supply, etc.

² 10th Report 1940, p. 20 (our emphasis).

Up to date, neither has unification of the various area organizations been achieved, nor have powers been granted to them to translate central plans into action.

4. SHORTCOMINGS AND REMEDIES

What are the reasons for these shortcomings? The first is the vested interest of the different Departments. Each Department tries to maintain its own organization under its own control, partly because of the system of departmental responsibility. To make decentralization effective, it is, however, necessary, not only to unify all the departmental area organizations¹ into one body, but also to pass all communications between this body and the centre through *one channel*; at present there are channels of communication between Regional Boards and Production Executive, between each official member and his respective department, and in addition between all the other area organizations (e.g., progress and production) and their respective departments. An effective organization could be achieved only if *one* unified area organization, and each of its members, were exclusively responsible to one central authority, e.g., the Production Executive. This incidentally would give to the Production Executive at once the necessary apparatus for planning, and controlling the execution of plans, which it so badly needs.

The second reason why decentralization so far has not been effectively carried through is that it would render superfluous the present system of sub-contracting and therefore weaken the dominating position of the firms which act as main contractors. At first sight it seems that the system of sub-contracting was chosen because it seemed impossible for the departments to deal directly with a great number of small and middle sized firms; an easy solution in peace time is to deal with a few big firms only who redistribute the orders which they cannot carry out themselves. At present this system is not satisfactory, because for many purposes there must be (or, at any rate, there should be) direct contact between the department and the producing firm: e.g., for the purposes of progressing, or of cost control. The big firms, however, are still retained in their function of relieving the administration of work with regard to contracting. The system of sub-contracting is open to serious objections; it often happens that the main contractor charges a profit on the sub-contracted work (in addition to the sub-contractor's profit) for which there is little justification. It leaves the main contractor the choice of his sub-contractors without, however, making him fully responsible for their shortcomings. Most important of all, it does not secure that idle capacity is used, that continuity of production is achieved, and that orders are distributed so as to secure the lowest possible cost. To secure a re-distribution of orders so that available capacity is more fully utilized, it is proposed to

¹ As far as they are concerned with production of war material.

extend the institution of 'capacity clearing centres'; this is an attempt to bring some organization into the system of sub-contracting, but it is far from being a satisfactory solution. The clearing centres act as official intermediaries between firms which want to pass on orders, and firms which have idle capacity. The firms may use this opportunity or they may not; the clearing centres have no power, and even less obligation to re-distribute contracts, if they find that some firms cannot execute their orders in time, or are inefficient and wasteful, whereas others have idle capacity and lower costs of production. The functioning of the clearing centres must apparently rely again on the initiative of private entrepreneurs acting under the profit incentive, but it has been made abundantly clear that this mechanism does not work at present.¹

The obvious solution to the problem of dealing with a great number of firms is that all the functions of the 'main contractor,' instead of being left to a private firm, should be taken over by the Regional Boards; in this way, the great number of small firms would, as hitherto, be dealt with by an intermediary with the only difference that this intermediary would be part of the Government organization and that it would be a systematic and stable organization instead of a casual and changing one. The Regional Boards would do all the surveying, progressing and distributing of orders within each Region, and the Centre—in the ideal case, the Production Executive—would only be concerned with the summary figures for each Region. The centre could draw up a production programme on the basis of summary figures of resources for each region, distribute orders en bloc to the different regions, and allocate raw materials in the same way, without concerning itself with the details of the distribution within each region. As the regions are very big, the system would probably have to be carried further by sub-division (the clearing centres have already involved subdividing the Regions).

¹ The conception of capacity clearing centres is influenced by the German model of the District Order Equalization Boards; these Boards have organized 'Order Bourses' which represent a kind of organized market for sub-contracts and are based on a high degree of standardization of certain orders; another necessary condition for the working of this system is the absence of cost-plus contracts. There is not enough evidence to judge the success or the shortcomings of this system, but it must be noted that in Germany the dispersion of orders over a large number of firms is due not so much to a search for idle capacity as to considerations of strategy, location of labour, transport, etc. It would, therefore, be wrong to expect much from an imitation of the German organization in this respect, the more so since the latter has largely resulted from a conflict between the interests of planning and the interests of the big concerns which dominate the German economy. This is not to deny that the regional organization in Germany has in many respects reached a more advanced state of development than in this country. The 'District Economic Boards' (which correspond to the 'Regional Boards') represent a complete unification of all regional organizations; they are directly responsible to the War Economic Staff and they are executive organs of the latter.

As against the above proposal it is often suggested that some functions, such as progressing and allocation of material, should be taken over by the Regional Boards while others, the distribution of orders, for example, should be exercised by the centre.¹ But the functions connected with the control of production (survey of capacity, contracting, allocation of material, progressing, cost control, to mention the most important) are all closely connected. The placing of contracts must be based on the survey of capacity, the most recent progress reports, and the results of cost control; if contracts are placed at the centre it means in practice that the distribution of all the sub-contracts is left to private firms, and is only loosely, if at all, connected with the work of the official progress organization, capacity survey, and cost control. An equally close connection exists between contracting and allocation of material; this connection becomes particularly important in case of a redistribution of contracts, as materials have to be re-allocated as well. The close connection between allocation of materials and progressing need not be stressed.

It thus appears that the five functions mentioned could be carried out effectively only by specialized departments of one and the same area organization, dealing all with the same firms, and keeping in closest touch with each other. The interconnection of these functions incidentally also shows that it is not economical to divide executive and advisory functions by vesting the former in a central authority and the latter in a regional organization. The decisions reached at the centre must be based on the detailed information collected locally, and this means that all the detailed problems dealt with by the area organizations have to be considered over again by the centre. This implies a great amount of duplication, and considerable delay. The two factors, amount of administrative work and delay involved in making decisions, are indeed decisive for the functioning of control, for, if the administrative machinery is overstrained, and if the delay threatens to do too much damage, things tend to be left, as in the times of peace, to the discretion of private industry. The conclusion is, therefore, that the control of the war economy could only be carried through with full effectiveness if sub-contracting were abolished, and all the functions ordinarily performed by the main contractors were taken over by regional and sub-regional bodies, which would then serve as executive organs of the central authority, while the latter would be free to devote itself to the control of the broad outlines of the production programme.

J. STEINDL.

¹ A *Times* leader (June 12th, 1941) advocating 'regionalism' at the same time stresses that 'contracts will continue, of course, to be placed at the centre.'

MANPOWER POLICY IN GERMANY

In view of the current discussion on manpower problems an analysis of the Nazi employment policy seems useful. At the outbreak of the war the employed working population in Greater Germany (including Austria and Sudetenland) was 24.46 million (including foreign workers). To this labour force about 3.2 million men and women were added between summer 1939 and winter 1940. The number of foreign workers had increased from 0.5 to 1.56 million¹ and, at the same time just over 1 million prisoners of war had been put to work. Furthermore between 0.8 and 1 million men who were previously unoccupied had entered into employment while the women labour force had risen by 300,000.¹

According to official statistics total employment of wage and salary earners (excluding forced labour service) developed as follows:

				Winter 1940-41	
				excluding prisoners	including prisoners
Total employment	...	...	Pre-War 24.46	22.67	23.7
Male	...	...	16.33	14.25	15.3
Female	...	...	8.13	8.42	8.42

According to these figures male employment fell by 1 million, total employment by 0.7 million. These figures suggest that something like 4 million people were mobilized in Germany at the end of 1940 as compared with the position in the summer of 1939 (but prior to the new call-up in preparation of the attack on the Balkans and Russia). An analysis of pre-war statistics indicates an armed force (including labour service) of about 2.5 million. On the basis of these figures the armed forces of the Reich at the end of 1940 would have numbered about 6.5 million. The manpower in the air force has been estimated at over 1 million. The navy may be put at between 0.1—0.2 million. This would imply an army of the order of magnitude of roughly 5.3 million including labour service, or if due allowance is made for reserves, etc., some 200 divisions. Independent observation has suggested very similar results which tends to justify the soundness of the indirect statistical approach.

Two important qualifications have to be made:

¹ *Reichsarbeitsblatt*, 1941, p. v-338. According to Wirtschaft und Statistik the increase was 1.56 million which gives a total of 2.1 million.

¹ Of the foreign workers (including prisoners) 1,391,000 are employed in agriculture of which 650,000 were prisoners. 670,000 civilian foreign workers are in industry and building. Some further 250,000 are in non-specified industries and recruited from the Protectorate whose employment is not stated. The proportion of women at 37.1 per cent of total, though considerably higher than in 1936 (31.8 per cent) has not yet reached the pre-Nazi level (37.3 per cent in January 1933). In the last few months a determined drive was instituted to increase the employment of women.

1. The pre-war figures for the armed forces *excluded* para-military services. These can be estimated at between 1—1.5 millions and were in the main contained in the category 'public officials' and 'miscellaneous and independent.' It is to be assumed that the number of police and other 'security' services have been considerably strengthened.

2. The number of *temporarily demobilized soldiers* engaged in industrial work is *not included* in the figure for employment, though these soldiers receive the normal salary or wage for the job they perform.¹ If we furthermore reflect that the size of the army was given as 160 divisions at the time of the Polish campaign, that a proportion of these have been demobilized during the winter 'lull' period of 1939-40, that the army having reached its maximum effective strength in the spring of 1940 was again partially demobilized in the summer of 1940, the picture of German employment can be very tentatively modified in the following manner:

SIZE OF THE ARMED FORCES AND VARIATIONS OF EMPLOYMENT
(IN MILLION)

	<i>Pre-war</i>	<i>Polish Campaign</i>	<i>End of 1939</i>	<i>French Campaign</i>	<i>End of 1940</i>
Armed Forces* ca.	2.5	5.0	4.0	6.5	5.5
German employment:					
Male workers	15.8	13.3	14.5	12.2	13.6
Male entrants†	—	0.2	0.2	0.4	0.2
Female workers	8.1	7.9	7.6	8.3	8.4
Foreign employment:					
Foreign workers‡	0.5	0.6	0.8	1.0	1.6
Prisoners of War	—	—	0.8§	0.6	1.0
Total employment	24.46	22.0	23.9	22.5	24.8

* Excluding workers temporarily demobilized.

† From 'natural growth' and from persons previously unoccupied.

‡ Reichsarbeitsblatt figures. If estimates are based on the figures published in *Wirtschaft und Statistik* (cf. above), total employment at the end of 1940 would be 25.3 million.

§ 180,000 war prisoners from Poland were later 'freed' and employed as ordinary workers.

A DOUBLE PURPOSE ARMY

These tentative estimates show that the Nazis have adjusted from time to time the apportionment of total manpower between the armed forces proper and trade and industry. They released men in periods when no major operations took place, and drafted them back when they started on a new campaign. In applying this policy they had the advantage that they themselves determined the alternating phases of lull and activity. Moreover, each new con-

¹ This is not quite as important a distinction in Germany as it would be in Britain as soldiers' dependents receive the pre-war earnings of the mobilized main wage-earners up to a given maximum.

quest supplied them with additional labour forces (prisoners and civilian workers) which they used ruthlessly in their production drive. The fact remains, however, that the policy of part demobilization has created a sort of double purpose army which is used to achieve maximum striking power and has enabled the Germans to maintain average employment at about the peak figure reached in the summer of 1939, in spite of the tremendous drain on manpower which the mobilization for the armed forces implied. From July 1940 until Spring 1941 industry had the first call on the services of skilled men or men who could be replaced only with great difficulty (*schwer ersetzbar*). In contrast to our own reservation system, the Nazi system is based not on age and occupation, but on the importance of the job the individual was performing (or was easily capable of performing). This principle is to some extent now being introduced in Britain by differentiating in the age limits between men employed in protected and unprotected firms. Another method having the same aim is the dereservation of certain occupations (for instance, electrical engineers) except if employed on essential work. There appears, however, to be in Germany a full understanding between the High Command and Ministry of War with their economic staffs on the one hand, and the production departments on the other hand, which are co-ordinated in the Supreme (Economic) Defence Council to adjust rival claims on the manpower of the country and to secure total planning. The British attitude—as the decision on coal mining shows—has not yet arrived at this point.

It now seems that the Nazis have increased their army to 250 divisions or some 6·5 million men. In the meantime their air force, including as it does maintenance and ground staff, must also have increased. The extension of occupation means a further drain on manpower. On the other hand their prisoner-working population has increased by 0·4—0·6 million, and there was a natural growth of, say, another 0·4 million. As the total strength of the Armed Forces is now at least 8 million, the net employment deficit, as contrasted with the winter, is 1·5 million at the minimum.¹ This would diminish employment to about 23·3 million in the Reich proper. The vital importance of the Russian resistance is shown even from this point of view: the Nazis are forced to expend war material at an enormous rate when production is necessarily falling on account of acute and increasing labour shortage. The consumption of stocks is thereby promoted from both sides.

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K. MANDELBAUM.

¹ This does not include the mobilization of women at a forced rate.

DIARY

FINANCE

The position in the Budget deficit financing in the last months is shown by the Table below.*

GOVERNMENT BORROWING (+) OR REPAYMENT (—) £Mn.	March April Av.	May	June July Av.
Tap Bills + Ways and Means Advances ...	+ 3†	+ 5	+ 72
Tender Bills ...	+ 10	+ 35	+ 30
Treasury Deposit Receipts ...	+ 71	— 4	+ 9
Floating Debt ...	+ 84	+ 36	+ 111
2½% National War Bonds + 3% Saving Bonds ...	+ 72	+ 165	+ 95
3% Defence Loan ...	+ 59	—	—
National Savings Certificates + 3% Defence Bonds ...	+ 35	+ 50	+ 31
Other Items ...	+ 2	+ 4	+ 5
Total Borrowing or Repayment ...	+ 252	+ 255	+ 242
CHANGES IN CLEARING BANKS LIABILITIES AND ASSETS £Mn.			
Deposits net of Balances with other Banks, etc.	+ 62	— 3	+ 83
Cash Basis ...	+ 7	— 5	+ 7
Bills and Call Money ...	— 6	+ 24	+ 56
Treasury Deposit Receipts ...	+ 66	+ 8	+ 3
Investments ...	+ 3	+ 29	+ 27
Advances ...	— 8	— 11	— 10

* The official figures are published at 4 and 5 weeks' intervals ; the figures given in the table are reduced roughly to the monthly basis.

† £5 million of bills redeemed in March out of Sinking Funds are excluded.

The rate of increase in Tap Bills + Ways and Means Advances in the July-June period was much higher than in May. It must be remembered that even after purchases under the Lease and Lend Act and payments under existing orders in the U.S.A. have been excluded from Budgetary accounts, Government Departments have still a considerable current lending capacity. This is based : (i) on the rise in Savings Bank deposits ; (ii) on the receipts of various public insurance funds ; and (iii) on the adverse balance of payment left after exclusion of the Government purchases in the U.S.A. mentioned above in so far as it is not covered by calling up of U.S.A. or Dominion securities. Since a considerable part of the last item accrues as sterling balances to the Central Banks of Dominions, and since these banks invest them sometimes in tender bills and sometimes in tap bills, strong fluctuations in the rate of increase in Tap Bills + Ways and Means Advances are bound to occur.

The sales of 2½ per cent National War Bonds and 3 per cent Saving Bonds were in the June-July period at a lower rate than the record level in May (which contained the London War Weapons Week), but higher than in the previous months of this year. This was probably due to the anticipation of replacement of these tap issues

by new ones with a lower interest or a longer term. The change actually announced in August was limited to the suspension of the issue of $2\frac{1}{2}$ per cent National War Bonds while 3 per cent Saving Bonds have been left on tap.

Bank Deposits showed a high rate of expansion which probably corresponds to a steadily increasing volume of transactions. This was reflected also in the rise of note circulation.

COMPENSATION AND THE WAR EFFORT

A plan to revise licences granted to retail food-shopkeepers was recently announced by Lord Woolton. According to this plan the issue of licences was to be restricted to traders who carry at least 25 customers on their books. There was to have been no automatic transfer of customers and the interests both of the public and of traders were to have been taken into consideration by the local Food Committees in their decision. The right of appeal to the Minister was safeguarded. The scheme as outlined by the Minister was thus reasonable and equitable. It was a beginning in the rationalization of food-distribution which is an essential war-economic measure both in order to increase 'productivity' and thus to decrease the cost of consumption goods and in order to tap the sole remaining reservoir of labour from which manpower can be drawn without further decreasing the supply of goods.

According to the *Times* of July 24th, 1941 (p. 4) the influential 1922 Committee of Private members made strong representations to the Minister. In consequence the measure has been modified to include only 'traders' obtaining rations for their families and friends. This is yet another instance where financial orthodoxy weakens the war effort. A solution could easily have been found had the Government considered a general measure for compensating all damage to capital and income due to the war,¹ a condition of which is of course a system of comprehensive rationing. In the absence of such a system of direct control the authorities are reluctant to take energetic action in shifting factors into the war sector if the shift would entail exceptional hardship to certain strata of the population who are politically powerful. The Committee appointed by the Board of Trade has also refused to envisage comprehensive compensation financed by the State for retail shops closed down. As it is impossible to obtain sufficient funds from the increased profits of the more fortunate shopkeepers—the total volume of turnover having decreased, and as an increase in retail margins, another expedient to obtain funds, would be directly contrary to the price stabilization policy—the absence of State compensation will prevent a radical policy of rationalization by weeding out unnecessary shops. A parallel exists in the case

¹ Cf. T. Balogh on the "Rôle of Compensation in the War Economic System," BULLETIN, Nov. 6th, 1941.

of bomb damage: there—as the loss of goodwill is not compensated—the Board of Trade has to grant rebuilding licences to shops, cinemas, etc., for otherwise their proprietors would become bankrupt. Thus essential scarce productive factors are absorbed in unessential rebuilding operations. In the case of shopkeepers it results in the inability to mobilize productive factors. Both results are inimical to the total war effort.

THE UNEMPLOYMENT FIGURES

According to figures published on August 11th the number of wholly unemployed men and boys fell by 7,900 to 113,662 and that of women and girls by 16,179 to 105,915 in the course of the period June 16th to July 14th. Total registered unemployment amounts to 277,000 compared with 302,000 a month ago and 827,000 a year ago. Of the 113,662 men and boys about 33,000 had been classified as unsuitable for industrial employment; the remaining 70,000 may be regarded as largely representing labour in process of transfer. An increase of 2,800 in the number of men and boys temporarily stopped was attributed to the concentration measures now being applied in the tinplate industry.

The figures give conclusive proof of the need for further extensive transfers of women from non-essential to essential employment and from 'civil life' to industry. The supply of male labour is rapidly becoming absolutely inelastic and further demands for labour will have to be met by the employment of women. Transfers of women workers are being made in the London area at the request of the Minister of Labour to particular employers, and the position in the North, now very 'tight,' will probably be somewhat eased when the recent arrangements for concentration in the weaving section of the cotton industry take full effect. The inadequacy of these contributions has however been demonstrated by Mr. Bevin's recent allusions to the need for more rigorous measures in the calling up of women for war work. Before recourse is had to extensive compulsion, however, efforts should be made to eliminate the many factors which prevent a large-scale voluntary movement into industry.

REGISTRATION OF BUILDERS

An order under the Defence Regulations issued on August 13th requires the registration before September 1st of all persons carrying on businesses as builders, plumbers, joiners, slaters, etc. Public works contractors, constructional and heating engineers and local authorities having building or civil engineering departments are included. After October 1st no person not registered will be permitted to carry on any of these trades.

The Regulation is clearly a necessary preliminary to a comprehensive reconstruction of the building industry for war purposes. The mobilization of the large aggregate labour force of small

building firms has been becoming increasingly urgent for some time. The first step must be the collection of extensive statistical information, which the forthcoming registration will provide. The establishment of regional groups, or panels of builders to whom work would be allocated would provide machinery for pooling local labour supplies, and would replace the present system of tendering. The latter tends in practice almost automatically to exclude small firms who, unable to obtain work on government contracts, maintain themselves precariously on work often of a less essential kind. Measures of this kind are referred to in the Director General's Statement on August 16th. The exact form and financial basis of concentration remain to be considered. What is essential is that it should provide for reasonable compensation of the many small firms concerned, for the sacrifice they must almost certainly be asked to make.

DOCK LABOUR

A scheme for dealing with labour supply problems at ports was announced on August 14th. An Essential Work (Dock Labour) Order provides for the formation by the National Joint Council for Dock Labour of a 'National Dock Labour Corporation, Limited,' which will promote and finance schemes in all principal ports except those (Merseyside and Clydeside) in which the Minister of War Transport is now the sole employer of dock labour. The employment of permanent men will not be affected by the scheme (which applies to them) but other dockers selected for inclusion will now be in permanent employment. When not at work, the docker will automatically enter the employment of the Corporation, by whom he will be paid 5s. for each of the 11 half-days on which he reports but is not required for and allocated to work. The docker's employment under the scheme is conditional not only on his reporting regularly but on his agreeing to accept any suitable work offered. One week's holiday with pay at the rate of 80s. or 75s. according to the size of the port will be allowed to each regular worker. The scheme will be financed by a national management fund, to which employers under approved schemes will be required to make a contribution (not exceeding, at present, 25 per cent of their gross wages bill) and which will be underwritten by the Exchequer. The chairman of the Corporation and a finance member will be appointed by the Minister of Labour and there will be three representatives of workers and employers respectively appointed by the Joint Council.

DISTRIBUTION OF LIQUID MILK

It has been announced by the Ministry of Food that on October 1st a comprehensive scheme for the distribution of liquid milk will be introduced. As a preliminary all consumers of liquid milk are

required to register with a retailer. It has been stated that holders of a children's ration book—i.e., children under 6—and expectant mothers will be guaranteed one pint and juveniles under 18, half a pint a day. The amounts to be allowed to invalids will be announced later. The supply of 'industrial milk' to factories, etc., will be continued. As regards the present outline of the scheme, two fundamental questions arise.

What is going to happen to the children's school milk? At present children under 5 are entitled to free or cheap milk under the Government scheme *unless* they are receiving milk at school, which, for small children, frequently amounts to two thirds of a pint a day on five days a week. To abolish the distribution of school milk and substitute it by cheap milk delivered to the child's home would be an undesirable change, as there is no certainty that the milk obtained by the family goes actually to the child for whom it is intended, and—what is essential—is taken by it regularly. A possible solution would be to allow a certain percentage of the milk coupons for home use and cancel the remainder in return for school milk.

Secondly, there is the supply of milk to the 4,000 odd officially registered vegetarians, for whom milk is now more than ever a food of vital importance. Their supply of animal proteins is far below that obtained by the non-vegetarians through their rations and through unrationed meat, fish and restaurant and canteen meals. The vegetarian, unless he can afford to have substantial cheese and egg dishes served in good restaurants, has none of these advantages, and needs about six pints of milk a week to have his minimum requirements of first-class protein. It should be given in the form of fresh full cream milk so as to supply a sufficiency of vitamins, especially vitamins A and D. This concession to the small number of vegetarians would, obviously, hardly affect the 'savings' under the new milk scheme.